What is claimed is:

1. A method of characterizing the etiology of a cancer in an individual by testing at least one cancer cell from the individual for at least one of a reduction in the level of expression of Las1 as compared to normal cells, and one or more mutations in the at least one cancer cell's Las1 gene.

2. The method according to claim 1, wherein the at least one cancer cell is tested for the presence of a mutation at codon 60 of the Las1 gene which encodes a mutant Las1 protein.

3. The method according to claim 1, wherein the at least one cancer cell is tested for the level of Las1 gene expression.

4. The method according to claim 3, wherein the level of Las 1 expression is tested by measuring mRNA transcribed from the Las1 gene.

5. The method according to claim 3, wherein the level of Las 1 expression is tested by measuring the amount of Las1 protein in the cell.

6. The method according to claim 5, wherein the level of Las1 expression is tested using an antibody to Las1 protein.

7. The method according to claim 2, wherein the presence of a mutation at codon 60 of the Las1 gene is tested by analyzing the coding sequence of the Las1 gene.

8. The method according to claim 2, wherein the presence of a mutation at codon 60 of the Las1 gene is tested by using an antibody that detects the mutant Las1 protein.

9. A method according to claim 1, comprising testing the at least one cancer cell from the individual for at least one of a reduction in the level of expression, or one or more mutations of one or more of the genes in the Pas-1 locus, which include Kras2, Lrmp, Bcat1, AK016641 and AK015530.

10. A method according to claim 9, comprising testing the at least one cancer cell from the individual for at least one of a reduction in the level of expression of Kras2 as compared to

non-cancer cells from the individual, and one or more mutations in the at least one cancer cell's genomic Kras2 gene.

11. A method of identifying an individual who is at risk of developing cancer by testing at least one cell from the individual for at least one of a reduction in the level of expression of Las1 as compared to normal cells, and one or more mutations in the at least one cell's Las1 gene.

12. The method according to claim 11, wherein the at least one cell is tested for the presence of a mutation at codon 60 of the Las1 gene which encodes a mutant Las1 protein.

13. The method according to claim 11, wherein the at least one cell is tested for the level of Las1 gene expression.

14. The method according to claim 13, wherein the level of Las 1 expression is tested by measuring mRNA transcribed from the Las1 gene.

15. The method according to claim 13, wherein the level of Las 1 expression is tested by measuring the amount of Las1 protein in the cell.

16. The method according to claim 15, wherein the level of Las1 expression is tested using an antibody to Las1 protein.

17. The method according to claim 12, wherein the presence of a mutation at codon 60 of the Las1 gene is tested by analyzing the coding sequence of the Las1 gene.

18. The method according to claim 12, wherein the presence of a mutation at codon 60 of the Las1 gene is tested by using an antibody that detects the mutant Las1 protein.

19. A method according to claim 1, comprising testing the at least one cell from the individual for at least one of a reduction in the level of expression, or one or more mutations of one or more of the genes in the Pas-1 locus, which include Kras2, Lrmp, Bcat1, AK016641 and AK015530.

20. A method according to claim 19, comprising testing the at least cancer cell from the individual for at least one of a reduction in the level of expression of Kras2 as compared to normal cells, and one or more mutations in the at least one cell's genomic Kras2 gene.

21. A method for treating an individual identified as having a mutant Las1 gene or reduced expression of Las1 protein by administering to the individual an agent that restores Las1 protein function.

22. The method according to claim 21, wherein the individual has an adenocarcinoma.

23. The method according to claim 22, wherein the individual has adenocarcinoma of the lung.

24. The method according to claim 23, wherein the Las1 protein is administered in a fashion such that it is specifically targeted to cancer tissue in the individual.

25. The method according to claim 21, wherein the agent is a Las1 protein.

26. The method according to claim 21, wherein the agent is a polynucleotide encoding a Las1 protein, wherein the polynucleotide is in operable connection with a promoter that directs its expression.

27. The method according to claim 21, wherein the treatment is prophylactic.